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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/510,195

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Jichu Chen

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EXAMINER

KURTZ, BENJAMIN M

ART UNIT

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1797

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/510,195	<b>Applicant(s)</b> CHEN ET AL.	
	<b>Examiner</b> BENJAMIN KURTZ	<b>Art Unit</b> 1797	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 23 April 2008.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1, 18, 19 and 21-26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 18, 19 and 21-26 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 April 2008 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |                                                                                      |                                                                   |
|--------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____                                                          | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

Claims 1, 18, 19 and 21-26 are currently pending, claims 2-17 and 20 are cancelled, claims 1, 18, 19, 21-25 are currently amended and claim 26 is new.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**1. Claims 1, 18, 19, 24 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bashara US 2 877 852 in view of Voll et al. US 5 624 560.**

Regarding claim 1, Bashara teaches a composite filtering mesh comprising: a bottom diffusion mesh (19) and two or more weave meshes (123) fixed on an outer surface of the bottom diffusion mesh, and at least one inter-layer diffusion mesh (50) positioned between two said weave meshes the inter-layer diffusion mesh being fixed on an outer surface of one of the two twill weave meshes (fig. 5). Bashara teaches a weave mesh but does not teach a metallic twill weave mesh. Voll teaches a metallic twill weave mesh (col. 3, lines 24-32). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the twill weave mesh of Voll

instead of the weave mesh of Bashara because it is plug resistant and retains a large effective open area in the filter (col. 3, lines 24-32).

Regarding claim 18, Bashara further teaches a metal fiber layer (18) is fixed on the outer surface of the filter mesh (fig. 5). Bashara does not teach the size of the metal wire or the thickness of the metal fiber layer. The only difference between the claimed invention and the prior art is a recitation of relative dimension. [W]here the only difference between the prior art and the claims was a recitation of relative dimensions of the claimed device and a device having the claimed relative dimensions would not perform differently than the prior art device, the claimed device was not patentably distinct from the prior art device, *Gardner v. TEC Systems, Inc.*, 220 USPQ 777 (1984).

Regarding claim 19, Voll teaches the twill weave mesh being 80-100 microns (Voll, fig. 6 and 7). However, Bashara does not teach the bottom diffusion mesh size or the inter-layer diffusion mesh size. The only difference between the claimed invention and the prior art is a recitation of relative dimension. [W]here the only difference between the prior art and the claims was a recitation of relative dimensions of the claimed device and a device having the claimed relative dimensions would not perform differently than the prior art device, the claimed device was not patentably distinct from the prior art device, *Gardner v. TEC Systems, Inc.*, 220 USPQ 777 (1984).

Regarding claim 24, Bashara teaches a sand control screen pipe comprising: a composite filtering mesh, a multi hole base pipe (12), an inner protective shroud (19), a plurality of supporting rings (20, 21) of the inner protective shroud and an inner pipe (15), the composite filtering mesh comprises a bottom diffusion mesh (the most inner

layer (50)), two or more weave meshes and at least one inter layer diffusion mesh (50) positioned between two weave meshes, the composite filtering mesh is fixed on the inner side of the multi hole base pipe and completely covers all through holes on the base pipe, the inner protective shroud has holes, and is fixed on the inner side of the composite filtering mesh and completely covers the composite filtering mesh, the supporting rings of the inner protective shroud are fixed on both ends of the inner side of the base pipe, the two ends of the inner protective shroud along the axial direction of the base pipe are fixed respectively on the supporting rings, the inner pipe is fixed on the inner side of the inner protective shroud (fig. 2, 3, 5). Bashara teaches a weave mesh but does not teach a metallic twill weave mesh. Voll teaches a metallic twill weave mesh (col. 3, lines 24-32). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the twill weave mesh of Voll instead of the weave mesh of Bashara because it is plug resistant and retains a large effective open area in the filter (col. 3, lines 24-32).

Regarding claim 25, Voll teaches the twill weave mesh being 80-100 microns (Voll, fig. 6 and 7). However, Bashara does not teach the bottom diffusion mesh size or the inter-layer diffusion mesh size. The only difference between the claimed invention and the prior art is a recitation of relative dimension. [W]here the only difference between the prior art and the claims was a recitation of relative dimensions of the claimed device and a device having the claimed relative dimensions would not perform differently than the prior art device, the claimed device was not patentably distinct from the prior art device, *Gardner v. TEC Systems, Inc.*, 220 USPQ 777 (1984).

**2. Claims 26, 21 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rouse et al. US 6 158 507 in view of Richard et al. US 5 611 399 and Simone et al. US 5 937 944 and Bashara '852 and Voll '560.**

Regarding claim 26, Rouse teaches a sand control screen pipe comprising: a pipe body (10) with through holes, a pair of ring hoops, and a pair of second supporting rings (42, 44) formed on the pipe body, a tubular inner protective shroud (18, 20) with through holes distributed on its surface, disposed on the pipe body and covering over the through holes of the pipe body, a filter mesh (22, 23) is fixed to an outer surface of the tubular inner protective shroud and its two ends are hermetically fixed by ring hoops (25, 30) (fig. 1, 2). Rouse does not teach the composite metallic filtering mesh as claimed.

Bashara in view of Voll teaches the metallic filtering mesh as described in the above rejection. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the filtering mesh as taught by Bashara in view of Voll in place of the filtering mesh of Rouse because the multiple layers of filter material provide more efficient and thorough filtering capabilities, where the additional layers (50) assist in keeping the filter material in tension and the twill weave is plug resistant and retains a large effective open area in the filter (Bashara: col. 5, lines 1-12, Voll: col. 3, lines 24-32).

Rouse teaches a second pair of support rings (42, 44) but not a first pair of support rings fixing the shroud. Fixing a shroud to a pipe body is known in the prior art to Bashara (fig. 2) and Richard (fig. 8) and Simone (fig. 1). The claimed elements of a pair of support rings fixing a shroud and a pair of ring hoops fixing a filter material are known in the prior art and one skilled in the art could have combined the elements as claimed by known methods with no change in their respective functions, and the combination would have yielded predictable results to one of ordinary skill in the art at the time of the invention. The technique of using a support rings is recognized as part of the ordinary capabilities of one skilled in the art. *KSR International Co. v. Teleflex Inc.*, 82 USPQ2d 1385 (2007).

Regarding claim 21, Bashara further teaches a metal fiber layer (18) is fixed on an outer surface of the outermost one of the weave meshes (fig. 5). Bashara does not teach the size of the metal wire or the thickness of the metal fiber layer. The only difference between the claimed invention and the prior art is a recitation of relative dimension. [W]here the only difference between the prior art and the claims was a recitation of relative dimensions of the claimed device and a device having the claimed relative dimensions would not perform differently than the prior art device, the claimed device was not patentably distinct from the prior art device, *Gardner v. TEC Systems, Inc.*, 220 USPQ 777 (1984).

Regarding claim 22, Bashara further teaches the bottom diffusion mesh (19) is a woven mesh and the inter layer diffusion mesh is a woven mesh (fig. 5) and Voll teaches the twill weave mesh being 80-100 microns (Voll, fig. 6 and 7). However,

Bashara does not teach the bottom diffusion mesh size or the inter-layer diffusion mesh size. The only difference between the claimed invention and the prior art is a recitation of relative dimension. [W]here the only difference between the prior art and the claims was a recitation of relative dimensions of the claimed device and a device having the claimed relative dimensions would not perform differently than the prior art device, the claimed device was not patentably distinct from the prior art device, *Gardner v. TEC Systems, Inc.*, 220 USPQ 777 (1984).

**3. Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rouse '507 in view of Richard '399, Simone '944, Bashara '852 and Voll '560 as applied to claim 26 above, and further in view of Ilfrey et al. US 5 858 691.**

Rouse in view of Richard, Simone, Bashara, and Voll teach the sand control screen pipe of claim 26 but do not teach supporting blocks. Ilfrey teaches a sand control screen pipe with a pipe body (501) having two or more supporting blocks (62) provided on an outer surface of the pipe body (fig. 2D). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the supporting blocks of Ilfrey because the element provide stabilization in the bore (col. 11, lines 59-65).

***Response to Arguments***



4. Applicant's arguments with respect to claims 1, 24 and 26 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to BENJAMIN KURTZ whose telephone number is (571)272-8211. The examiner can normally be reached on Monday through Friday 8:00am to 4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Sample can be reached on 571-272-1376. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Benjamin Kurtz  
Examiner  
Art Unit 1797

5/29/08 /BK/

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